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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,159	10/16/2003	Ravi Chidambaran	030569	6637

7590 03/09/2006

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EXAMINER

BERNSHTEYN, MICHAEL

ART UNIT PAPER NUMBER

1713

DATE MAILED: 03/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/687,159

Applicant(s)

CHIDAMBARAN ET AL.

Examiner

Michael Bernshteyn

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 9, 15-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-14, 18, 19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 1-19 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

1. Applicant's election without traverse of Group I, claims 1-8 and 10-14 in the reply filed on December 19, 2005 is acknowledged. Claim 1, 3, 7 and 11-14 have been amended; claims 18 and 19 were added, claims 9 and 15-17 have been withdrawn.
2. Claims 1-8 and 10-19 are pending.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1 and 18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. It is not clear from the figures 1 and 3 does the said flow path contact a membrane or not and whether or not the contact of resin with a resin is limited to said transport framework.

Therefore, there is no way to enable one skilled in the art to which it pertain, or with which it is most nearly connected, to make and/or use the invention. Correction is required.

4. Claims 11 and 12 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claims contain subject matter which was

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not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The applicant does not show in all examples which exactly binder (or binding agent) was used for preparation anion and cation resin beds. Therefore, there is no way to enable one skilled in the art to which it pertain, or with which it is most nearly connected, to make and/or use the invention. Correction is required.

5. Claim 19 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claims contain subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. According to Applicants instant claim is supported from the first paragraph on page 4, which recites the following: "So that the objective mention in C above can be achieved all the bipolar sites have to be created on this path by design" (page 8, 2nd paragraph), but it is not clear what is common with instant claim?

Therefore, there is no way to enable one skilled in the art to which it pertain, or with which it is most nearly connected, to make and/or use the invention. Correction is required.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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6. Claims 1, 10 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term 'substantially' used in all above claims is a relative term, which renders the claims indefinite. The term 'substantially' is not defined by the claims, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not reasonably appraised of the scope of the invention.

Claim Rejections - 35 USC § 102 and § 103

7. The test of this section of Title 35, U.S.C. not included in this action can be found in a prior Office Action.

8. Claims 1-8, 10 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 103(a) as obvious over Osawa et al. (U.S. Patent 6,379,518) for the rationale recited in paragraph 12 of Office Action dated on October 16, 2005.

9. Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Osawa et al. in view of Nidola et al. (U.S. Patent 5,015,344) for the rationale recited in paragraph 13 of Office Action dated on October 16, 2005.

Response to Arguments

10. Applicants contend that claims 1-19 are pending in the application, with claims 18 and 19 have been added and claims 9 and 15-17 have been withdrawn. Claims 1, 3, 7,

11-15 and 17 have been amended herein (paragraph I. Status of Claims and paragraph II. Restriction). Claims 15 and 17 have been withdrawn without traverse, therefore it is not clear why they have been amended.

11. Applicants contend that the layout of the amended specification now follows the recommendations of 37 C.F.R. §1.77(b) (paragraph III. Objection to the specification). Examiner accepts it and the objection of the specification is withdrawn.

12. Applicants contend that the amended claims 11 and 12 and the amended specification show the binding agent concentrations and which binding agents was used in the various examples. However in Example 1 (page 11, 4th paragraph) and example 2 (page 13, 4th paragraph) applicants again use the terminology "suitable binding agent".

13. Applicants traverse the rejection of claims 1-8, 10 and 14 under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 103(a) as obvious over Osawa et al. (U.S. Patent 6,379,518) and claims 11-13 under 35 U.S.C. 103(a) as being unpatentable over Osawa et al. in view of Nidola et al. (U.S. Patent 5,015,344).

Applicant's arguments have been fully considered but they are not persuasive.

14. Applicants contend that the resin in the flow path does not contact a membrane (page 11, 3rd paragraph). It is worth to mention that there is a new subject matter that does not disclose in the specification. Based on figures 1 and 3 it is completely unclear whether or not the flow path contacts a membrane.

15. Applicants contend that claim 1 includes a "substantially nonporous resin framework" and Osawa does not teach whether the resin framework is nonporous.

Based on Osawa's disclosure, any framework that it has be porous, because there is no

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way to tell, Osawa neither anticipates nor renders obvious claim 14, claim 1 or those claims that depend from claim 1 (pages 11-12).

Examiner again has to point out that the terminology "substantially nonporous resin framework" is indefinite; it is not clear for one of ordinary skill in the art what is the scope of the invention, which density range has such nonporous resin, etc. Osawa clearly discloses in figure 9, that the frame 120 is provided with flow inlets 126, 127 and with flow outlets 128, 129 (col. 11, lines 18-29), which could be made only from solid (nonporous) resin.

16. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

17. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

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18. In response to applicant's argument that Nidola's references is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992).

In this case, Nidola's reference discloses an electrode comprising a gas permeable and liquid permeable coating bonded to an ion exchange membrane, and a suitable binder, resistant to the aggressive cell environment, is used to obtain an adequate bonding. Furthermore the binder may be the same or substantially the same composition as the membrane to which it is bonded (abstract). Certainly, both references belong to the same field of endeavor concerning the obtaining an ion exchange media and reasonably pertinent to the particular problem with which the applicant was concerned.

Applicant's arguments do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections.

In response to applicant's argument about rejection of claims 2 and 6, it's worth to mention that there is no specific limitation of a side chain-type liquid crystalline polymeric substance in claim 2 and dependable claims 5 and 6, and rejection of those

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claims remains in force. Please, see § 1 and 2 of Office Action dated on August 25, 2005.

1. In the light of the discussion above, the rejection of record has not been withdrawn. The rejection remains in force.
2. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Bernshteyn whose telephone number is 571-272-2411. The examiner can normally be reached on M-F 8-5:30.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael Bernshteyn
Examiner
Art Unit 1713

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03/03/2006


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